

**In the Claims**

Applicant has submitted a new complete claim set showing marked up claims with insertions indicated by underlining and deletions indicated by strikeouts and/or double bracketing.

Please cancel claims 23-32, 65 and 66 without prejudice or disclaimer.

Please amend pending claim 67 as noted below.

1-53. (Canceled).

54. (Original) A method of treating a surface comprising:  
passing a fluid along a portion of a surface under conditions of substantially laminar flow wherein the fluid comprises a concentration gradient of at least one substance, the concentration gradient being substantially perpendicular to the direction of flow and being substantially continuous across the fluid; and  
treating differentially a plurality of sections of the portion of the surface exposed to different concentrations of the substance.

55. (Original) The method of claim 54 wherein the portion of the surface is less than 10 cm wide.

56. (Original) The method of claim 55 wherein the portion of the surface is less than 1 cm wide.

57. (Original) The method of claim 56 wherein the portion of the surface is less than 1 mm wide.

58. (Original) The method of claim 54 wherein the substance is a catalyst.

59. (Original) The method of claim 54 wherein the treatment comprises hardening the surface.

60. (Original) The method of claim 54 wherein the treating comprises depositing the substance on the surface.
61. (Original) The method of claim 60 wherein the portion of the surface is less than 1 cm in width.
62. (Original) The method of claim 54 wherein the treating comprises forming a topological gradient on the surface.
63. (Original) The method of claim 62 wherein the treating comprises removing material from the surface.
64. (Original) The method of claim 63 wherein the portion of the surface is less than 1 cm in width.
65. (Canceled).
66. (Canceled).
67. (Currently Amended) A method of producing a series of solutions comprising:  
contacting a concentrated solution of a substance and a less concentrated solution of the substance under conditions of substantially laminar flow to form a combined fluid; and  
separating the combined fluid, without using a membrane, into a plurality of separate streams wherein at least one of the separate streams comprises the substance at a concentration that is substantially different than the concentration of the substance in another of the separate streams.

68. (Original) The method of claim 67 wherein the concentration of the substance in one of the separate streams is about equal to the concentration of the substance in either the concentrated solution or the less concentrated solution.

69. (Original) The method of claim 67 further comprising the step of contacting a third solution comprising a second substance with the combined fluid.

70. (Original) The method of claim 69 wherein at least one of the separate streams contains concentrations of the first substance and the second substance at a ratio that is different than the ratio of the first substance and the second substance in at least one other of the separate streams.